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William A. Henry, II
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| EXAMINER | |
|---|---|
| HARRINGTON, ALICIA M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2873 | |

DATE MAILED: 08/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/827,070 | BERGEN, RICHARD F. | |
| | Examiner | Art Unit | |
| | Alicia M Harrington | 2873 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *19 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8-13* is/are allowed.

6)☒ Claim(s) *1,2,4,6,7,14,15,17,19,20* is/are rejected.

7)☒ Claim(s) *3,5,16 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *0404*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The Examiner considered the information disclosure statement filed on 4/19/04.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1,7,14,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlo et al. (US 5,841,596).

Regarding claim 1, Perlo discloses an apparatus for creating a line, comprising:

a laser source (1);

a device (3) for receiving radiant energy from said laser source (1), said device being adapted such that radiant energy projected from said laser (1) source into said device emerges from said device (3) in an outward pattern (see figure 6a) and

a mirror (8) with a reflecting surface, said mirror (8) having a channel therein through which said radiant energy from said laser source (1) is projected towards said device. However, Perlo fails to specifically disclose in the embodiment of figure 6a, where the light is projected into the said device emerges in an outward pattern to form a line in a predetermined plane (see col. 3,lines 50-67). In col. 4, lines 33-45, Perlo discloses the shape of the mirror can determine the outward pattern in a plane. Perlo discloses a circle or rectangular pattern (see figures 8 and 9

for example) as an outward pattern in the form of a line in a predetermined plane. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to create a line where the light is projected into the said device emerges in an outward pattern to form a line in a predetermined plane, since Perlo teaches shaping the mirror to produce various projected shapes/lines and teaches such devices is easily manufactured.

Regarding claim 7, Perlo discloses the reflecting surface of the mirror is integrated with the device. However, Perlo discloses the claimed invention except for a mirror with reflecting surface being separate from the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the mirror and device separate, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. Nerwin v. Erlichman, 168 USPQ 177,179.

Regarding claim 14, Perlo discloses an apparatus for creating a line capable of performing a method for creating a line, comprising:

Providing a laser source (1; see figure 6a);

Providing a device (3) for receiving radiant energy from said laser source, said device being adapted such that radiant energy projected from said laser source (1) into said device emerges from said device in an outward pattern;

and

Providing a mirror (8) with a reflecting surface, said mirror (8) having a channel therein through which said radiant energy from said laser source (1) is projected towards said device. However, Perlo fails to specifically disclose in the embodiment of figure 6a, where the light is projected into the said device emerges in an outward pattern to form a line in a predetermined

plane (see col. 3,lines 50-67). In col. 4, lines 33-45, Perlo discloses the shape of the mirror can determine the outward pattern in a plane. Perlo discloses a circle or rectangular pattern (see figures 8 and 9 for example) as an outward pattern in the form of a line in a predetermined plane. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to create a line where the light is projected into the said device emerges in an outward pattern to form a line in a predetermined plane, since Perlo teaches shaping the mirror to produce various projected shapes/lines and teaches such devices is easily manufactured.

Regarding claim 20, Perlo discloses the reflecting surface of the mirror is integrated with the device. However, Perlo discloses the claimed invention except for a mirror with reflecting surface being separate from the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the mirror and device separate, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. Nerwin v. Erlichman, 168 USPQ 177,179.

4. Claims 1,2,6,7,14,15,19,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taboada et al. (US 5,898,809).

Regarding claim 1, Taboada discloses an apparatus for creating a line, comprising:

a laser source (2);

a device (6; fiber optic bundle) for receiving radiant energy from said laser source (2), said device (6) being adapted such that radiant energy projected from said laser (2) source into said device emerges from said device in an outward pattern to form a line in a predetermined plane (see figure 11-partial circle);

and a reflecting surface (92), said reflecting surface (92) having a channel (see figure 11) therein through which said radiant energy from said laser source is projected towards said device (see col.6, lines 59-67 and col. 7, lines1-7). Taboada fails to specifically disclose the reflecting surface is a mirror. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mirror, since a mirror inherently has a reflective property and would be a functionally equivalent surface. Additionally, Taboada teaches using a mirror in other embodiments as reflective surface.

Regarding claim 2, Taboada discloses said line is a level line (see col.1, lines 10-15 and col. 2, lines 6-13) and in form a portion of a circle (see figure 11).

Regarding claim 6, Taboada discloses said device is in the form of a fiber optic rod (see figure 11). The bundle is in the form of fiber optic rod.

Regarding claim 7, Taboada discloses the reflecting surface is on the surface of the device. As discussed above in claim 1, a mirror would be a functionally equivalent material for a reflecting surface. It would have also been obvious to one of ordinary skill in the art at the time the invention was made to space the reflecting surface from the device, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. Nervwin v. Erlichman, 168 USPQ 177,179. Additionally, Taboada teaches several embodiments where the reflective surface is a mirror and separate from the device.

Regarding claim 14, Taboada discloses an apparatus for creating a line capable of performing a method for creating a line, comprising:

Providing a laser source (2; see figure 11);

Providing a device (6) for receiving radiant energy from said laser source, said device

being adapted such that radiant energy projected from said laser source (1) into said device emerges from said device in an outward pattern;

and

Providing a reflective surface (92) , said reflecting surface (92) having a channel therein through which said radiant energy from said laser source (2) is projected towards said device.

Taboada fails to specifically disclose the reflecting surface is a mirror. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mirror, since a mirror inherently has a reflective property and would be a functionally equivalent surface. Additionally, Taboada teaches using a mirror in other embodiments as reflective surface.

Regarding claim 15, Taboada discloses a method wherein said line is level line (see col. 1, lines 10-15 and col. 2, lines 6-13) and in the form of a portion of a circle (see figure 11).

Regarding claim 19, Taboada discloses wherein the device is in the form of a fiber optic rod (see figure 11). The bundle is in the form of fiber optic rod.

Regarding claim 20, Taboada discloses the reflecting surface is on the surface of the device. As discussed above in claim 14, a mirror would be a functionally equivalent material for a reflecting surface. It would have also been obvious to one of ordinary skill in the art at the time the invention was made to space the reflecting surface from the device, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. Nervwin v. Erlichman, 168 USPQ 177,179. Additionally, Taboada teaches several embodiments where the reflective surface is a mirror and separate from the device.

5. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlo (US 5,841,596) as applied to claims 1 and 14 respectively above, and further in view of Douglass, II (US 6,540,381).

Regarding claim 4, as discussed in claim 1, Perlo discloses an apparatus for creating a line where the device is plate (6). Perlo teaches the apparatus is for use in lighting systems, such as display light systems (see col. 1,lines 5-15). However, Perlo fails to specifically disclose an embodiment where the device is a hollow tube.

In a related field of endeavor, Douglass discloses a hollow tube (see col. 5,lines 5-30 and figure 2) for use in lighting fixtures with a light being projected into the hollow tube to produce a radial pattern (circular pattern of light). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Perlo, to include a hollow tube, since Douglass teaches the tube produces a radial pattern of light when projecting light into it.

Regarding claim 17, as discussed in claim 14, Perlo discloses an apparatus for creating a line where the device is plate (6). Perlo teaches the apparatus is for use in lighting systems, such as display light systems (see col. 1,lines 5-15). However, Perlo fails to specifically disclose an embodiment where the device is a hollow tube.

In a related field of endeavor, Douglass discloses a hollow tube (see col. 5,lines 5-30 and figure 2) for use in lighting fixtures with a light being projected into the hollow tube to produce a radial pattern (circular pattern of light). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Perlo, to include a hollow tube, since Douglass teaches the tube produces a radial pattern of light when projecting light into it.

***Allowable Subject Matter***

6. Claims 8-13 allowed.

7. Claims 3,5,16,18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:
Regarding claims 3, 5,16,18, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which at least include an apparatus and method for creating a line wherein said device is in the form of a capillary array as claim 3 and 16; wherein said device is in the form of a hollow within a hollow tube as in claim 5 and 18.
Regarding claim 8, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which at least include an apparatus for creating a lines wherein a glass member positioned between said mirror and said device with said mirror and said glass member having a channel therein through which said radiant energy from said laser source is projected towards said device as claimed.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M Harrington whose telephone number is 571 272 2330. The examiner can normally be reached on Monday - Thursday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571 272 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alicia M Harrington
Examiner
Art Unit 2873

AMH